

WHAT IS CLAIMED IS:

1. An electric bending endoscope comprising:

a bending portion arranged to an inserting portion; and

a bending driving unit which bends the bending portion,

wherein the bending driving unit comprises:

a motor which generates driving force for bending the bending portion;

a first unit which holds the motor;

a driving force transmitting member which transmits the driving force of the motor; and

a second unit which bends the bending portion by the driving force of the motor, and

the electric bending endoscope further comprising:

a first holding member which detachably supports, to the first unit, a rotating shaft arranged to the driving force transmitting member of the second unit.

2. An electric bending endoscope according to Claim 1, wherein the first unit comprises an outer frame and an inner frame for holding the motor, and a universal code for connecting an outer member of the inserting portion to the inner frame and for connecting the electric bending endoscope to a peripheral device is connected to the inner frame via a second holding member for holding the universal

code.

3. An electric bending endoscope according to Claim 1, wherein the first unit has an attaching hole which attaches the rotating shaft and at least three positioning holes arranged near the attaching hole, and the first holding member has a mounting hole which is fit into the rotating shaft, a projecting and positioning piece which is fit into the attaching hole, and at least three projecting and positioning pins which are fit into the positioning holes.

4. An electric bending endoscope according to Claim 3, wherein the first unit further has an opening which connectably accommodates the second unit to the motor and the driving force transmitting member, and the attaching hole has a guide hole which guides and accommodates the rotating shaft upon mounting the second unit via the opening and which is formed by notching the bottom surface of the first unit.

5. An electric bending endoscope according to Claim 2, wherein the inner frame is accommodated in the outer frame so that both opposed side surfaces thereof are exposed, and the second holding member is fixed to both the exposed opposed side surfaces.

6. An electric bending endoscope according to Claim 5, wherein the second holding member has a ring-shaped holding portion for fitting the universal code and a fixing portion for fixing the holding portion to the inner frame by at least three supporting members.

7. An electric bending endoscope according to Claim 6, wherein the holding portion has a plurality of screw holes at predetermined positions on the peripheral surface and the universal code is fit by screw operation of a screw via a screw hole arranged to a connector at an edge portion of the universal code and the screw holes of the holding portion.

8. An electric bending endoscope according to Claim 4, further comprising:

a fixing member which fixes the inner frame to a main frame in the second unit.

9. An electric bending endoscope according to Claim 4, the main frame is positioned to the inner frame by using a positioning tool for positioning the main frame in the second unit in three-axis directions to the inner frame, and the inner frame and the main frame in the second unit are fixed by using a fixing member for fixing them.

10. An electric bending endoscope according to Claim 4, wherein positioning and fixing member for positioning, connecting, and fixing the main frame in the second unit in three-axis directions to the inner frame is arranged to a connecting portion of the inner frame and the main frame.

11. An electric bending endoscope according to Claim 4, wherein the main frame in the second unit is arranged so that a sliding member for the bending operation, a signal cable for transmitting an endoscope image pick-up signal, and a light guide are detached in the endoscope operating portion.

12. An electric bending endoscope comprising
bending driving unit which bends a bending portion
arranged at an edge side of an inserting portion of the
electric bending endoscope,

wherein the bending driving unit comprises:

a frame unit which holds a motor as a driving force
for bending the bending portion; and

a bending and stretch mechanism unit having a
driving force transmitting member for bending the bending
portion by using rotation driving force from the motor, and

the frame unit has holding member which detachably

holds a rotating shaft arranged to the driving force transmitting member of the bending and stretch mechanism unit.

13. An electric bending endoscope according to Claim 12, wherein the frame unit comprises an outer frame and an inner frame which holds the motor and which is made of a hard member stronger than the outer frame, connects an outer member of the inserting portion to the inner frame, and further connects a universal code by arranging holding member for holding the universal code to the inner frame.

14. An electric bending endoscope comprising:
a bending portion arranged to an inserting portion; and
bending driving means which bends the bending portion,
wherein the bending driving means comprises:

driving force generating means which generates
driving force for bending the bending portion;

a first unit which holds the driving force
generating means;

a driving force transmitting member which transmits
the driving force of the driving force generating means; and

a second unit which bends the bending portion by
the driving force of the driving force generating means, and
the electric bending endoscope further comprising:

first holding means which detachably supports, to the first unit, a rotating shaft arranged to the driving force transmitting member of the second unit.